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RED SEA RECORD OF A *FUNGIA*-ASSOCIATED EPITONID (*)**

KEY WORDS: Molluscs, Epitoniidae, Red Sea, Parasitism on *Fungia*.

Riassunto

Alcuni esemplari di *Epitonium* sp. in differente stato di crescita, sono stati rinvenuti con le loro masse di uova sulla superficie inferiore di un esemplare di *Fungia paumotensis*. E' la prima segnalazione di rapporti fra questa specie di madreporario con Epitoniidae. Questo ritrovamento effettuato nel complesso recifale dello Sharm Obhur, presso Gedda, è il primo per il Mar Rosso e viene ad aggiungersi alla scarsa letteratura esistente sulla associazione Epitoniidae-*Fungia*. Si ipotizza che le relazioni fra il mollusco ed il madreporario siano trofiche (parassitismo) e legate alla ovodeposizione.

Summary

Some specimens of *Epitonium* sp. in different growth stage, were found, together with egg mass, on the undersurface of a specimen of *Fungia paumotensis*. It is the first time that such a species of madreporian is reported to be associated with Epitoniids. Moreover no similar records were previously reported for the Red Sea. We suppose that the relationship between the mollusk and the madreporian is both trophic (parasitism) and linked to spawning.

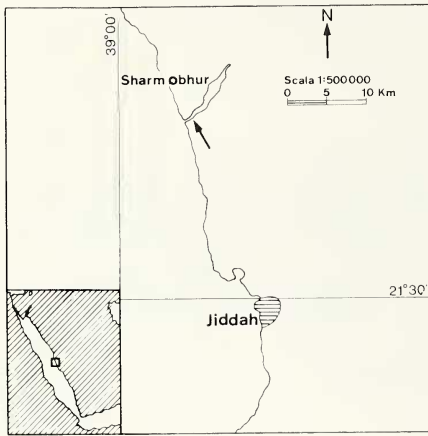
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Epitonids are known to be seldom associated with solitary corals of the genus *Fungia*. Until now three species have been recorded and all are from shallow waters of the Indo-Pacific Region. These are: *Epitonium costulatum* KIENER, associated to *Fungia* sp., from the Philippines (ROBERTSON, 1963); *Epitonium ulu* PILSBRY, from the Hawaiian islands (BÖSCH, 1965; GUINTEHER, 1970) and *Epitonium* sp., from the Maldive islands (ROBERTSON, 1966; 1970) both associated to *Fungia scutaria* LAMARCK.

A fourth species was found by one of us (M.T.) in the Sharm Obhur, 30 km north of Jiddah (Saudi Arabia) on January 1978. (Map 1)



Map. 1 - Map showing localities mentioned in the text.

Our Epitonids one adult (fig. 1), two young specimens and egg mass (figs 2, 2a) were collected under a specimen of *Fungia pau-motensis* (STUTCHBURYI) (fig. 3) lying in a sandy pocket of the reef fringing the shore near the mouth of the Sharm, at a depth of about two meters.

The monograph on the Red Sea Epitonids of JOUSSEAUME (1911) is, in many cases, not very useful for a definitive specific determination because of the bad quality of the figures and the ambiguity of many diagnoses. Thus, we were unable to ascertain the correct specific position of our specimens. The diagnosis of our adult shell is as, follows:

shell elongate-conical, thin, with a large and deep umbilicus. Nuclear whorls 3 and a half, smooth and white; telococh whorls 6, rather convex. Suture constricted. Sculpture given by 22 axial costae, very thin and obsolete, with interspaces crossed by fine spiral grooves. Aperture ovate; peristome smooth. Color white. length 6.5 mm. Soft parts yellow.

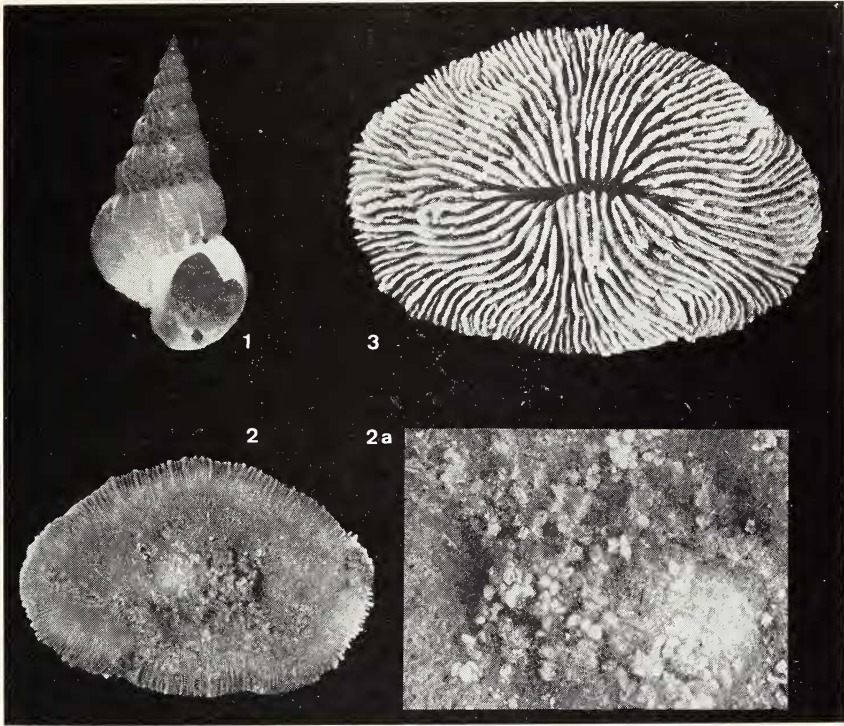


Fig. 1 - Adult specimen of *Epitonium* sp. collected under *Fungia paumotensis*.
 Fig. 2 - Undersurface of *Fungia paumotensis* showing the egg mass of *Epitonium* sp.
 Fig. 2a - Enlargement of the preceding figure.
 Fig. 3 - Upper surface of *Fungia paumotensis*.

The presence of both egg mass and juveniles on the undersurface of *Fungia paumotensis* is probably indicating that our *Epitonium* sp. selects this coral for spawning. Such behaviour was observed also by BOSCH (1965) in *E.ulu*, whose egg mass were laid under *Fungia scutaria*. However, considering the trophic habit of most Epitonids, it is probable that the relationship between *Epitonium* and *Fungia* is also of parasitism.

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Specific determination of *Fungia* specimen from Sharm Obhur
by Dr. Brian Rosen (British Museum of Natural History), London.

REFERENCES

- BOSCH H.F., 1965 - A Gastropod Parasite of Solitary Corals in Hawaii. *Pacific Science*, **19** (2): 267-268.
- GUINTEHER E., 1970 - Biology of Some Hawaiian Epitoniidae. In The Biology of Mollusca, University of Hawaii, Hawaii Institute of Marine Biology Techn. Rep., 1: 10-11.
- JOUSSEAUME F., 1911 - Faune malacologique de la Mer Rouge. Scalidae. *Mem. Soc. Zool. France*, **24**: 108-246.
- ROBERTSON R., 1963 - Wentletraps (Epitoniidae) Feeding on Sea Anemones and Corals. *Proc. Malacol. Soc. London*, **35**: 51-63.
- ROBERTSON R., 1966 - Am. Malacol. Un. Reports, 1965: 6-8.
- ROBERTSON R., 1970 - Review of the Predators and Parasites of Stony Corals, with Special Reference to Symbiotic Prosobranch Gastropods. *Pacific Science*, **24**: 43-54.